



Great Lakes Works
Environmental Dept.
No. 1 Quality Drive
Ecorse, Michigan 48229

April 25, 2017

EES Case Management Unit
Environmental and Natural Resources Div.
U. S. Department of Justice
Box 7611
Washington, DC 20044-7611

Eric Cohen
Office or Regional Counsel, C-14J
US EPA, Region V
77 West Jackson Blvd.
Chicago, IL 60604

Compliance Tracker (AE-17J)
Air Enforcement and Compliance Assurance
U. S. Environmental Protection Agency
Region 5
77 West Jackson Blvd.
Chicago, IL 60604

Neil D. Gordon
Michigan Dept. of Attorney General
Environment, Natural Resources, and
Agriculture Division
P. O. Box 30755
Lansing, MI 48909

Wilhemina McLemore
Michigan Department of Environmental Quality
Air Quality Division
Cadillac Place, Suite 2-300
3058 W. Grand Blvd – Suite 2-300
Detroit, Michigan 48202-6058

Sir/Madam:

Re: *United States, et al. v United States Steel Corporation*
Consent Decree 2:12-cv-304, DJ# 90-5-2-1-06476/1
United States Steel Corporation – Great Lakes Works
B2 Blast Furnace Large Bell Repair and Inspection report

Pursuant to Paragraph V.A.12.b. of the above-referenced Consent Decree, U. S. Steel is submitting the B2 Blast Furnace Large Bell Repair and Inspection Report.

On October 24, 2016, the Great Lakes Works' B2 Blast Furnace was taken down for an extended outage to install a bell seal ring on the large bell. Installing the new bell seal ring on the large bell required a significant amount of work including:

- The lockout of the furnace top and associated equipment
- Securing the large bell and ensuring the bell was in the proper position when secured, not pulled off center or skewed
- Removal of the gas seal door
- Installation of safety turnbuckles to secure the large bell to the hopper
- Removal of the hard surfacing in twelve locations on the large bell in preparation of welding
- Rigging the four seal ring sections to prepare to place into position
- Removal of the safety turnbuckles
- Opening of the large bell and lowering the seal ring segments into position with the

DEPT. OF JUSTICE - ENRD
ENVIRONMENT DIVISION
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90-5-2-1-06476

April 25, 2017

Page 2

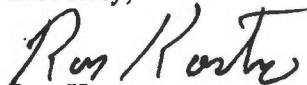
- interlocking connections joined together
- Closing of the large bell once the ring was in position
- Securing of the large bell once again and ensuring the bell was in the proper position when secured, not pulled off center or skewed
- Installation of safety turnbuckles
- Tack welding the bell seal ring segments together
- Welding the twelve clips to the large bell
- Finishing welding the seal ring segments together
- Seal welding the top of the seal ring to the large bell
- Removal of the four seal ring hanger assemblies
- Removal of the safety turnbuckles
- Unlocking and cycling of the large bell

During the extended outage, USS personnel were inspecting the repair work being completed. Once the repair was complete, the Blast Furnace Maintenance Area Manager did a final inspection of the large bell seal ring confirming the work was complete and effective. During the inspection, the Blast Furnace Maintenance Area Manager confirmed the large bell was free of visible holes, gouges, cracks, excessive wear and was seating properly with the installation of the seal ring.

The B2 Blast Furnace returned to production on November 1, 2016 after the large bell seal ring installation. To evaluate the effectiveness of the repair once in production USS conducted certified visible emission observations of the B2 Blast Furnace top. These readings were conducted by third party observers and occurred across four days during the week beginning November 27, 2016. The visible emission observation sheets are attached.

I certify under penalty of law that this document and all attached were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. This certification requirement does not apply to emergency or similar notification where compliance would be impractical.

Sincerely,



Ron Kostyo
General Manager, Great Lakes Works
Great Lakes Works
United States Steel Corporation



Alexis Piscitelli
Director, Environmental Control
Great Lakes Works
United States Steel Corporation

cc: David Hacker (USS)

Attachments

Visual Determination of Opacity

DATE

11-29-16

FACILITY

B2 BLAST FCE

Start Time

1:20 P.M.

End Time

2:20 P.M.

OBSERVER

P. Kuyshin - Vedio Water

LOCATION

Z.I. USS GLW

Wind Direction and Speed

SW 10-20 CLOUDY

Sky Condition

Temp:

56°

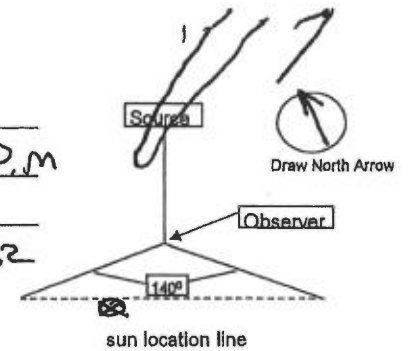
OBSERVER'S LOCATION

SE - 110 YDS FROM B2

Comments:

CHARGING AREA

BACKGROUND



HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
2:00	0						1:30	30	0	0	0	0	
	1							31	0	0	0	0	
	2							32	0	0	0	0	
	3							33	0	0	0	0	44,690
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	31,780
	10							40	0	10	15	5	
	11							41	5	0	0	0	
	12							42	0	0	0	0	
	13							43	5	0	15	10	
	14							44	0	0	5	0	
	15							45	0	5	10	10	
	16							46	5	0	0	0	
	17							47	0	0	0	0	
	18							48	0	0	0	0	
	19							49	15	5	0	0	
1:20	20	0	0	0	0	START V.E.O.		50	10	10	0	0	
	21	0	0	0	0	32,400 (Coal Rates)		51	10	5	5	0	
	22	0	0	0	0			52	10	0	5	0	
	23	0	0	0	0			53	0	0	0	0	
	24	0	0	0	0			54	0	10	5	0	
	25	0	0	0	0			55	0	5	5	0	
	26	0	0	0	0			56	0	0	0	0	300 10
	27	0	0	0	0			57	0	5	10	0	
	28	0	0	0	0			58	5	5	0	0	
	29	5	0	0	0			59	0	0	0	0	

Visual Determination of Opacity

FACILITY

B2 BLAST FEE

DATE

11-29-16

Start Time

1:20 P.m.

End Time

2:20 P.m.

OBSERVER

P. Kuyshole - Vedio Water

LOCATION

Z.I. USS GLW

Wind Direction and Speed

SW 10-20 CLOUDY

Sky Condition

Temp:

56°

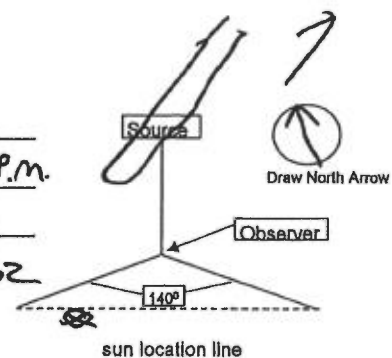
OBSERVER'S LOCATION

SE ~110 YDS FROM B2

Comments:

CHARGING AREA

BACKGROUND



sun location line

HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
2:00	0	0	0	0	0			30					
	1	0	0	0	0			31					
	2	0	10	5	5			32					
	3	5	0	0	0			33					
	4	0	0	0	0			34					
	5	0	0	0	0			35					
	6	0	0	5	0			36					
	7	0	0	5	5			37					
	8	0	0	0	0			38					
	9	15	10	5	0			39					
	10	0	0	0	0			40					
	11	0	0	10	5			41					
	12	0	0	0	6			42					
	13	0	0	0	0			43					
	14	0	0	0	0	35,760		44					
	15	0	0	0	0			45					
	16	10	5	0	0			46					
	17	0	0	0	0			47					
	18	0	0	0	0			48					
	19	0	0	0	0			49					
2:20	20	0	0	0	0	END V.E.O.		50					
	21							51					
	22							52					
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					

Visual Determination of Opacity

FACILITY

B2 BLAST FCE

DATE

11-30-16

Start Time

12:30 PM

End Time

1:30 PM

OBSERVER

P. Kuyshak - Vedic Water

LOCATION

Z.T. USS GLW

Wind Direction and Speed

SW 5-10 P. CLOUDY

Sky Condition

Temp:

55°

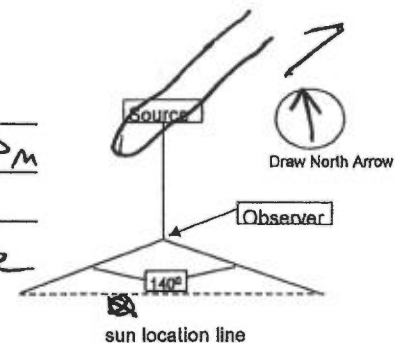
OBSERVER'S LOCATION

SE ~ 110 YDS FROM B2

Comments:

CHARGING AREA

BACKGROUND



HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
1:00	0	35	15	0	0		12:30	30	0	0	15	10	START V.E.O.
	1	10	0	0	0			31	0	0	0	10	27,420
	2	0	10	0	0			32	0	0	0	30	
	3	0	15	0	0			33	20	25	15	5	
	4	0	10	35	20			34	0	0	0	0	
	5	5	5	0	30			35	5	5	5	10	
	6	10	10	0	35			36	5	0	0	0	
	7	10	10	0	0			37	10	10	0	0	
	8	30	25	10	0			38	0	25	0	0	
	9	0	25	0	15			39	0	35	25	0	
	10	0	15	10	0	20,210		40	0	15	15	25	
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	12	0	35	25	0			42	30	0	0	40	
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	14	0	0	30	0			44	0	0	0	0	
	15	15	0	0	0			45	25	35	10	0	
	16	0	45	20	10			46	0	0	0	0	
	17	0	35	15	0			47	0	15	25	0	
	18	0	30	10	0			48	10	25	0	0	
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	20	10	0	0	15			50	0	0	0	0	
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	23	0	40	20	0			53	0	0	25	0	
	24	0	25	0	0			54	0	0	30	10	
	25	0	10	0	0			55	15	0	15	0	
	26	0	25	0	0			56	0	0	0	0	
	27	0	0	0	0			57	10	0	0	0	
	28	15	0	0	45			58	35	15	0	0	
1:30	29	5	0	0	0	END V.E.O.		59	40	20	5	0	

Visual Determination of Opacity

DATE

12-1-16

FACILITY

B2 BLAST FCE

Start Time

11:00 AM

End Time

12:00 PM

OBSERVER

P. Kuytjole - Vedio wale

LOCATION

2. J. VSS GLW

Wind Direction and Speed

SW 10-25

Sky Condition

OVERCAST

Temp:

39°

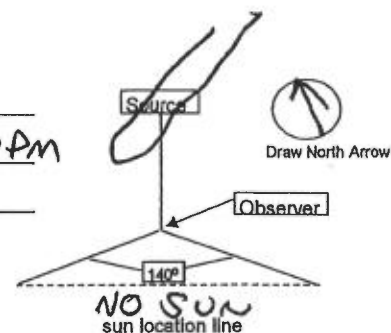
OBSERVER'S LOCATION

SE 110 YDS FROM B2

Comments:

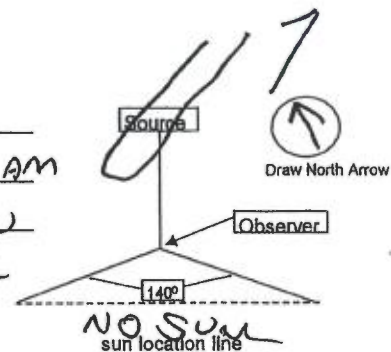
CHARGING AREA

BACKGROUND



HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
11:00	0	0	5	0	0	START V.E.O.	11:30	30	0	0	5	0	
	1	0	0	0	0			31	0	10	5	5	
	2	0	0	0	0			32	0	10	0	0	
	3	0	5	5	0			33	0	0	5	5	
	4	0	0	0	0			34	10	0	0	0	
	5	0	10	5	0			35	0	0	0	0	
	6	0	0	5	0			36	0	0	0	0	
	7	0	0	0	0			37	0	0	0	0	
	8	0	10	0	5			38	0	10	0	0	
	9	0	0	0	0			39	0	10	0	0	
	10	0	0	0	0			40	5	0	0	0	
	11	0	0	5	5			41	15	0	5	0	
	12	0	0	0	0	28,740		42	0	0	0	0	
	13	0	0	0	0			43	10	10	0	0	
	14	0	0	0	0			44	0	0	0	0	
	15	0	0	0	0			45	15	5	0	0	
	16	0	0	0	0			46	0	5	0	0	
	17	0	0	0	0			47	0	10	5	0	
	18	10	5	0	0			48	0	0	0	0	
	19	0	0	10	0			49	5	0	10	0	
	20	0	15	5	0			50	0	0	0	0	
	21	0	0	0	0			51	5	0	0	0	
	22	0	0	0	10			52	0	5	0	0	
	23	5	0	5	0			53	0	0	0	0	
	24	10	0	0	0			54	0	0	0	0	
	25	10	10	0	0			55	0	0	0	0	
	26	0	0	0	15			56	0	0	15	0	
	27	10	0	5	0			57	0	0	0	0	
	28	0	0	0	0			58	0	0	0	0	34,020
	29	0	0	0	0		12:00	59	0	0	0	0	END V.E.O.

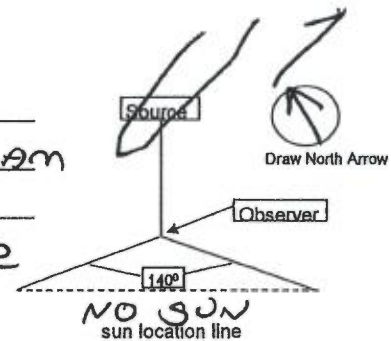
Visual Determination of Opacity
 FACILITY B2 BLAST FCE
 OBSERVER P. Kuytjoh - Vedio water
 Wind Direction and Speed SW 10-20 Sky Condition OVERCAST Temp: 40°
 DATE 12-2-16
 Start Time 10:50 AM End Time 11:50 AM
 LOCATION Z.I. USS GLW
 OBSERVER'S LOCATION SE ~ 110 YDS FROM B2
 Comments: CHARGING AREA
 BACKGROUND



HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
11:00	0	0	5	0	0			30					
	1	0	0	0	5			31					
	2	0	0	0	0			32					
	3	0	0	10	0			33					
	4	0	0	0	15			34					
	5	0	0	0	0			35					
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	7	0	0	0	5			37					
	8	0	0	0	0			38					
	9	0	0	10	0			39					
	10	0	0	0	0			40					
	11	0	0	0	5			41					
	12	0	0	0	0			42					
	13	0	0	0	0			43					
	14	0	0	0	0			44					
	15	0	0	5	0			45					
	16	0	10	5	0			46					
	17	0	0	5	5			47					
	18	0	0	0	10			48					
	19	0	0	0	0			49					
	20	0	0	0	0		10:50	50	0	0	0	0	START V.E.O
	21	0	0	0	0			51	0	0	0	0	
	22	0	0	0	0			52	0	0	0	0	
	23	0	5	0	5			53	0	0	0	0	
	24	0	0	0	0			54	0	0	0	0	
	25	0	0	0	0			55	5	0	0	0	
	26	0	0	0	0			56	0	0	0	0	
	27	0	0	0	0			57	0	0	0	0	
	28	0	0	0	5			58	0	0	0	0	
	29	5	0	0	0			59	0	0	0	0	

Visual Determination of Opacity

FACILITY: **B2 BLAST FCE**
 DATE: **12-2-16**
 OBSERVER: **P. Kuytjale - Verlin Water**
 Start Time: **10:50 AM** End Time: **11:50 AM**
 LOCATION: **Z.I. USS GLW**
 Wind Direction and Speed: **SW 10-20** Sky Condition: **OVERCAST** Temp: **40°**
 OBSERVER'S LOCATION: **SE ~ 110 YDS FROM B2**
 Comments: **CHARGING AREA**



HOUR	MIN	SECONDS				Comments	HOUR	MIN	SECONDS				Comments
		0	15	30	45				0	15	30	45	
	0						11:30	30	10	5	0	5	
	1							31	10	5	0	0	
	2							32	0	0	0	0	
	3							33	0	0	15	5	
	4							34	0	0	0	0	
	5							35	0	0	0	0	
	6							36	0	0	0	0	
	7							37	0	0	0	0	
	8							38	0	0	0	0	
	9							39	0	0	0	0	
	10							40	0	10	0	0	
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	15							45	10	0	0	0	
	16							46	0	0	0	0	
	17							47	0	5	0	0	
	18							48	0	0	0	0	
	19							49	0	5	0	0	
	20						11:50	50	0	0	0	0	END V.E.O.
	21							51					
	22							52					
	23							53					
	24							54					
	25							55					
	26							56					
	27							57					
	28							58					
	29							59					